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10/715,922	11/18/2003	Toshifumi Osawa	CANO:099	4228

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02/22/2007

EXAMINER

HSU, AMY R

ART UNIT	PAPER NUMBER
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2609

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/715,922

Applicant(s)

OSAWA, TOSHIFUMI

Examiner

Amy Hsu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/18/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing-Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claim Objections

1. Claims 5,6,13 are objected to because of the following informalities:

The following quoted phrases from Claim 5-6 are written improperly which renders the meaning ambiguous. Claim 5 reads "...wherein said photometric device outputs luminance information a plurality of piece of luminance information for a plurality of areas...". Claim 6 uses the phrase "...said control circuit causes said image pickup device to carry out the first storage by changing the one of the storage time and the output amplification factor..." Claim 13 also uses improper language, which renders the claim unclear. The appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 14-15 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The computer-readable program described in claims 14-15 does not qualify under a statutory category of patent eligible subject matter. For example, claim 14 is directed to a computer-readable program, and fails to claim the program recorded on an appropriate computer readable medium so as to be structurally and functionally interrelated to the medium and permit the function of the claimed invention to be realized. The same rationale applies to claims 15.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, ⁷⁻⁹~~6-9~~ are rejected under 35 U.S.C. 102(e) as being anticipated by Sato (US 6,839,087), hereinafter referred to as Sato.

Regarding Claim 1, Sato teaches an image pickup apparatus comprising: a taking lens; a main body; (*Col 3, Line 7*) an image pickup device that receives light passing through said taking lens and outputs an image signal (*Col 4, Lines 17-19*); a photometric device that receives the light passing through said taking lens and outputs luminance information (*Col 4, Lines 56-59 describes a photomentering sensor which acts as a photometric device to receives and measures the light passing through and outputs luminance information by determining aperture size*); a control circuit that sets an exposure compensation value according to an output from said photometric device (*Col 5, Lines 32-35 describes how a first exposure time is calculated. This first exposure time is used as a value to compensate for the final exposure time. This value is calculated in accordance with the value obtained by the photomentering device*); wherein said control circuit sets a first exposure compensation value according to the luminance information outputted from said photometric device (*Col 2 Lines 40-42, and*

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Col 6 Lines 22-25 explains how the exposure time is used as a compensation factor), to cause said image pickup device to carry out a first storage of the light passing through said taking lens, based on the set first exposure compensation value (Fig. 2 shows a step S102 where the first exposure time is calculated, and following this step are other steps using this value which means between steps S102 and S103 the image pickup device carries out a first storage of the light passing through the lens), and sets a second exposure compensation value according to a result of the first storage (Col 5 Lines 47-49 along with Fig. 2 S106 describe a step to set a second exposure according to the first storage, this second exposure values is used as a compensation value for the final exposure time), to cause said image pickup device to carry out a second storage of the light passing through said taking lens, based on the set second exposure compensation value (the image pickup device disclosed by Sato inherently carries out a second storage of the light passing through after step S106 in Fig. 2 because it is later used to calculate final exposure time).

Regarding Claim 2, Sato teaches an image pickup apparatus as claimed in claim 1, wherein said taking lens is removably attached to said main body (Col 3, Line 9), and said control circuit acquires information on characteristics of said taking lens from said taking lens (Fig 1. reference number 17 is a control circuit which works in conjunction with reference number 11, the interchangeable or taking lens) and sets the exposure compensation value according to the luminance information outputted from said photometric device and the information on characteristics of said taking lens to cause said image pickup device to carry out the first storage (Col 2 Lines 40-42).

Regarding Claim 3, Sato teaches an image pickup apparatus as claimed in claim 1, further comprising a mirror element (*Fig.1 reference number 21 and Col 3 Lines 36-38*), and wherein the light passing through said taking lens reaches said photometric device when said mirror element is in a first position (*Col 4 Lines 8-13 describes when the mirror is in a completely raised position light will enter through the lens*), and the light passing through said taking lens does not reach said photometric device when said mirror element is in a second position (*Col 3 Lines 63-67 through Col 4 Lines 1-3 describe how when the mirror is in an inclined position the focal plane shutter is closed to the light path*).

Regarding Claim 4, Sato teaches an image pickup apparatus as claimed in claim 3, further comprising an eyepiece lens (*Col 3, Line 43 and Fig. 1 reference number 24*) used in observing a subject by a user, and an optical element that divides the light passing through said taking lens (*Col 3, Line 42 describes a pentagonal prism*) into light reaching said photometric device (*Col 3 Line 65-67 through Col 4 Lines 1 describe the light reaching the photometering device through the lens*) and light reaching said eyepiece lens (*Col 3 Lines 41-43 describe how light reaches the eyepiece due to its position*).

Regarding Claim 7, Sato teaches an image pickup apparatus comprising: a taking lens; a main body(*Col 3 Line 7*); an image pickup device that receives light passing through said taking lens and generates an image signal (*Col 4 Lines 17-19*); a photometric device disposed at a location different from a location at which said image pickup device is disposed (*Fig.1 shows the photometric device, reference number 52,*

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disposed at a different location than the image pickup device, reference number 33), for receiving the light passing through said taking lens and outputting luminance information (Col 4 Lines 56-59); a mirror element movably disposed between said taking lens and said image pickup device (Fig. 1 reference number 21), for reflecting the light passing through said taking lens in a direction different from said image pickup device (Col 3 Lines 63-67 through Col 4 Lines 1-8); an optical element disposed between said photometric device and said mirror element (Fig. 1 reference number 23), for guiding light reflected from said mirror element to said photometric device (Col 3 Line 67 through Col 4 Line 1-4); a control circuit that sets an exposure compensation value according to an output from said photometric device (Col 5 Lines 32-35); wherein said control circuit sets a first exposure compensation value according to the luminance information outputted from said photometric device, to cause said image pickup device to carry out a first storage of the light passing through said taking lens, based on the set first exposure compensation value (Fig. 2 shows a step S102 where the first exposure time is calculated, and following this step are other steps using this value which means between steps S102 and S103 the image pickup device carries out a first storage of the light passing through the lens), and sets a second exposure compensation value according to a result of the first storage (Col 5 Lines 47-49 along with Fig. 2 S106 describe a step to set a second exposure according to the first storage, this second exposure values is used as a compensation value for the final exposure time), to cause said image pickup device to carry out a second storage of the light passing through said taking lens, based on the set second exposure

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compensation value (*the image pickup device disclosed by Sato inherently carries out a second storage of the light passing through after step S106 in Fig. 2 because it is later used to calculate final exposure time*)).

Regarding Claim 8, Sato teaches an image pickup apparatus as claimed in claim 7, wherein the light passing through said taking lens reaches said photometric device when said mirror element is in a first position (*Col 4 Lines 8-13 describe when the mirror is in a completely raised position light will enter through the lens*), and the light passing through said taking lens does not reach said photometric device when said mirror element is in a second position (*Col 3 Lines 63-67 through Col 4 Lines 1-3 describe how when the mirror is in an inclined position the focal plane shutter is closed to the light path*).

Regarding Claim 9, Sato teaches an image pickup apparatus as claimed in claim 7, further comprising an eyepiece lens (*Col 3, Line 43 and Fig. 1 reference number 24*) used in observing a subject by a user, and wherein said optical element divides the light reflected from said mirror element (*Col 3, Line 42 describes a pentagonal prism*) into light reaching said photometric device (*Col 3 Line 65-67 through Col 4 Lines 1 describe the light reaching the photometering device through the lens*) and light reaching said eyepiece lens (*Col 3 Lines 41-43 describe how light reaches the eyepiece due to its position*).

Regarding Claim 10, Sato teaches a control method for an image pickup apparatus including a taking lens, a main body, an image pickup device that receives light passing through the taking lens and outputs an image signal (*Col 4 Lines 17-19*),

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and a photometric device that receives the light passing through the taking lens and outputs luminance information (*Col 4 Lines 56-59*), the control method comprising: a photometric step of causing the photometric device to calculate field luminance information (*Col 5 Lines 32-35*); a first compensation step of setting a first exposure compensation value based on the field luminance information calculated in said photometric step (*Col 2 Lines 40-42*); a first storage step of causing the image pickup device to carry out a first storage of the light passing through the taking lens, based on the first exposure compensation value set in said first compensation step (*Fig. 2 shows a step S102 where the first exposure time is calculated, and following this step are other steps using this value which means between steps S102 and S103 the image pickup device carries out a first storage of the light passing through the lens*); a second compensation step of setting a second exposure compensation value according to a result of the first storage carried out in said first storage step (*Col 5 Lines 47-49 along with Fig. 2 S106 describe a step to set a second exposure according to the first storage, this second exposure values is used as a compensation value for the final exposure time*); and a second storage step of causing the image pickup device to carry out a second storage of the light passing through the taking lens, based on the second exposure compensation value set in said second compensation step (*the image pickup device disclosed by Sato inherently carries out a second storage of the light passing through after step S106 in Fig. 2 because it is later used to calculate final exposure time*).

Regarding Claim 11, Sato teaches a control method as claimed in claim 10, wherein the taking lens is removably attached to the main body (*Col 3 Line 9*), and in said first compensation step, information on characteristics of said taking lens is acquired from the taking lens and the exposure compensation value is set according to the information on characteristics of the taking lens and the luminance information (*Col 2 Lines 40-42*).

Regarding Claim 12, Sato teaches a control method for an image pickup apparatus including a taking lens, an image pickup device, and a photometric device disposed at a location different from a location at which the image pickup device is disposed (*Fig. 1 shows the photometric device, reference number 52, disposed at a different location than the image pickup device, reference number 33*), the image pickup apparatus being capable of switching between a state in which light passing through the taking lens is caused to reach the photometric device, and a state in which the light passing through the taking lens is not caused to reach the photometric device (*Col 3 Lines 63-67 through Col 4 Lines 1-8*), the control method comprising: a photometric step of causing the photometric device to determine field luminance information (*Col 4 Lines 56-59*); a first compensation step of setting a first exposure compensation value based on the field luminance information determined in said photometric step; a first storage step of causing the image pickup device to carry out a first storage of the light passing through the taking lens, based on the first exposure compensation value set in said first compensation step (*Fig. 2 shows a step S102 where the first exposure time is calculated, and following this step are other steps*

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using this value which means between steps S102 and S103 the image pickup device carries out a first storage of the light passing through the lens); a second compensation step of setting a second exposure compensation value according to a result of the first storage carried out in said first storage step (Col 5 Lines 47-49 along with Fig. 2 S106 describe a step to set a second exposure according to the first storage, this second exposure values is used as a compensation value for the final exposure time); and a second storage step of causing the image pickup device to carry out a second storage of the light passing through the taking lens, based on the second exposure compensation value set in said second compensation step (the image pickup device disclosed by Sato inherently carries out a second storage of the light passing through after step S106 in Fig. 2 because it is later used to calculate final exposure time).

Regarding Claim 13, Sato teaches a control method as claimed in claim 12, wherein the light passing through the taking lens is caused to reach only one of the image pickup device and the photometric device. This claim is interpreted to mean the light passing through the taking lens is caused to reach only one of the two devices, in this case Sato teaches the light passing through the lens reaches the image pickup device, or CCD image sensor (*Col 4 Lines 17-20*)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim ~~5~~^{5 and 6} is rejected under 35 U.S.C. 103(a) as being obvious over Sato (US 6,839,087) in view of Takei (US 5510837).

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding Claim 5, Sato teaches an image pickup apparatus as claimed in claim 1, but fails to teach a photometric device that outputs luminance information on a plurality of pieces of luminance information for a plurality of areas into which a photographic screen is divided. However, Takei teaches a similar image pickup apparatus which compensates for exposure by using light measuring circuits to detect

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input luminance signal levels (*Col 4 Lines 64-65*). Takei also teaches in *Fig 6. and Col 5 Lines 44-47*, the image sensing plane is divided into multiple parts and the level of luminance of each divided area is evaluated. It would have been obvious at the time the invention was made to one of ordinary skill in the art to combine the image pickup apparatus that adjusts exposure based on luminance information taught by Sato with the similar apparatus taught by Takei and dividing the luminance information into a plurality of luminance information based on dividing the sensing area in multiple parts.

Regarding Claim 6, Sato teaches an image pickup apparatus as claimed in claim 1, and the concept of the first and second exposure which act as compensation values to the final calculated exposure (*Col 6 Lines 32-34*). Sato also teaches the image pickup device to carry out the first storage (*Col 2 Lines 40-42*), and causes said image pickup device to carry out the second storage (*Col 5 Lines 47-49*). However, Sato fails to teach the exposure compensation values including one of a storage time or an output amplification factor of the image pickup device. Takei teaches a similar apparatus with similar functions and concepts (*Lines 1-5 and 9-12 of abstract*). Takei also teaches that the compensation signal output together with the light measuring circuits, or photometric device, has a direct relationship with the control of the gain, or output amplification factor. Claim 6 is interpreted to mean the exposure compensation values each include at least either one of the following: a storage time and an output amplification factor. Takei teaches the exposure compensation value, based on the input from the light measuring device, having a direct relationship with the gain or output amplification factor. It would have been obvious at the time the invention was

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made to one of ordinary skill in the art to use the relationship of output amplification factor to exposure compensation value, based on luminance information from the light measuring device to modify the invention disclosed by Sato making the exposure compensation values to include at least an output amplification factor. Further, to change the second exposure compensation value based on the output amplification factor.

7. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US 6839087).

Regarding Claims 14-15, a computer-readable program is described for implementing a control method for an image pickup apparatus. The program comprises limitations that are all taught by Sato. It would have been obvious at the time the invention was made to one of ordinary skill in art to create a program to accomplish all the aspects of the invention disclosed by Sato, which includes all the aspects in Claims 14-15.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure includes Suzuki (US 5619265), Yoshimura (US 5677733), Kehtarnavaz (2003/0020826), Yoshimura (US 6570620), and Hamada (US 6215960).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy Hsu whose telephone number is 571-270-3012.


The examiner can normally be reached on M-F 8am-5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amy Hsu
Examiner
Art Unit 2622


RICKY Q. NGO
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2/19/07